

Amended Claims

1. Apparatus for protecting electric circuitry and/or an electric consumer against damage from excessive electric energy comprising a voltage limiting element which has connecting parts which are coupled to current paths of the consumer via soldering surfaces and a spring which subjects the soldering surfaces to mechanical prestress so that, in the event of a loss of the soldering connection, the element is lifted off the soldering surface and separated from the current paths, characterized in that for each of two current paths one conductor (2, 2' and 3, 3' respectively) is provided on a circuit plate (1) which is interrupted by pairs of soldering surfaces (6, 6' and 7, 7' respectively), wherein one of the soldering surfaces is coupled to a current source and the other is connected to the consumer and in that connecting parts (9, 10) of element (8) are soldered together at the pair of soldering surfaces (6, 6' and 7, 7' respectively).

2. Apparatus according to claim 1, characterized in that the conductors (2, 2' and 3, 3' respectively) have solder surfaces (4, 4'; 5, 5') for connection to the current paths and the soldering surfaces (6, 6'; 7, 7') for element (8) are next to each other beneath connecting parts (9, 10) of element (8).

3. Apparatus according to one of claims 1 to 6, characterized by a soldering material for soldering the element (8) which has a defined melting point that is a function of a predetermined, permissible heating temperature.

4. Apparatus according to one of claims 1 to 3, characterized by a leaf spring (11) which has at least one shoulder (12) that extends through a slot (13) in circuit plate (1) and pushes against the element (8).

5. Apparatus according to one of claims 1 to 4, characterized in that one end of the leaf spring (11) lies in an edge cutout (14) and lateral sides on the circuit plate (1) and in that the other end has a locking hook (16) which extends through an opening (17) in circuit plate (1).

6. Apparatus according to one of claims 1-5, characterized in that element (8) comprises a suppressor diode which sets a predetermined voltage value.

7. Apparatus according to one of claims 1 to 6, characterized in that the consumer comprises a storage battery.

8. Apparatus according to claim 7 characterized in that the protective element and the storage battery are arranged in a housing.

9. Apparatus according to claims 7 or 8, characterized in that the storage battery comprises at least one Li-Ion-cell.

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